IN THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of detecting a malfunction with a force sensor in an infusion pump having a motor to drive a plunger slide into a reservoir, the method comprising:

taking current measurements to the motor;

detecting when the plunger slide is seated in the reservoir based on the current measurements; and

detecting a problem with the force sensor when the force sensor independently fails to register a value indicating that the plunger slide is seated in the reservoir.

2. (Original) The method of claim 1 further comprising:

measuring movement of the plunger slide by an encoder as encoder counts; and

using the encoder counts to confirm that the current measurements are correctly detecting movement of the plunger slide.

3. (Original) The method of claim 1 further comprising:

measuring movement of the plunger slide by an encoder as encoder counts; and

signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset encoder count threshold is exceeded.

4. (Original) The method of claim 1 further comprising:

measuring the time since the plunger slide was seated in the reservoir as indicated by the current measurements; and

signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset time threshold is exceeded.

5. (Original) The method of claim 1, wherein the step of detecting when the plunger slide is seated in the reservoir is comprised of:

calculating an average current based on the current measurements;

comparing the average current to a threshold current; and

detecting when the plunger slide is seated in the reservoir when the average current exceeds the threshold current.

6. (Original) The method of claim 5, wherein the step of calculating an average current uses the latest five current measurements.

7. (Original) The method of claim 5, wherein the step of calculating an average current discards a high current measurement and a low current measurement.

8. (Original) The method of claim 1, wherein the step of detecting a problem with the force sensor indicates the force sensor has failed.

9. (Original) The method of claim 1, wherein the step of detecting a problem with the force sensor indicates the force sensor is marginal.

10. (Original) The method of claim 1, wherein the current measurements to the motor are taken every 70 milliseconds.

11. (Currently Amended and Withdrawn) A system of detecting a malfunction with a force sensor in an infusion pump having a motor to drive a plunger slide into a reservoir, the ~~method~~ system comprising:

means for taking current measurements to the motor;

means for detecting when the plunger slide is seated in the reservoir based on the current measurements; and

means for detecting a problem with the force sensor when the force sensor independently fails to register a value indicating that the plunger slide is seated in the reservoir.

12. (Withdrawn) The system of claim 11 further comprising:

means for measuring movement of the plunger slide by an encoder as encoder counts; and

means for using the encoder counts to confirm that the current measurements are correctly detecting movement of the plunger slide.

13. (Withdrawn) The system of claim 11 further comprising:

means for measuring movement of the plunger slide by an encoder as encoder counts; and

means for signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset encoder count threshold is exceeded.

14. (Withdrawn) The system of claim 11 further comprising:

means for measuring the time since the plunger slide was seated in the reservoir as indicated by the current measurements; and

means for signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset time threshold is exceeded.

15. (Withdrawn) The system of claim 11, wherein the step of detecting when the plunger slide is seated in the reservoir is comprised of:

means for calculating an average current based on the current measurements;

means for comparing the average current to a threshold current; and

means for detecting when the plunger slide is seated in the reservoir when the average current exceeds the threshold current.

16. (Withdrawn) The system of claim 15, wherein the step of calculating an average current uses the latest five current measurements.

17. (Withdrawn) The system of claim 15, wherein the step of calculating an average current discards a high current measurement and a low current measurement.

18. (Withdrawn) The system of claim 11, wherein the step of detecting a problem with the force sensor indicates the force sensor has failed.

19. (Withdrawn) The system of claim 11, wherein the step of detecting a problem with the force sensor indicates the force sensor is marginal.

20. (Withdrawn) The system of claim 11, wherein the current measurements to the motor are taken every 70 milliseconds.

21. (Original) An article of manufacture containing code for detecting a malfunction with a force sensor in an infusion pump having a motor to drive a plunger slide into a reservoir, comprising a computer usable media including at least one embedded computer program that is capable of causing at least one computer to perform:

taking current measurements to the motor;

detecting when the plunger slide is seated in the reservoir based on the current measurements; and

detecting a problem with the force sensor when the force sensor independently fails to register a value indicating that the plunger slide is seated in the reservoir.

22. (Original) The article of manufacture of claim 21 further comprising:

measuring movement of the plunger slide by an encoder as encoder counts; and

using the encoder counts to confirm that the current measurements are correctly detecting movement of the plunger slide.

23. (Original) The article of manufacture of claim 21 further comprising:

measuring movement of the plunger slide by an encoder as encoder counts; and

signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset encoder count threshold is exceeded.

24. (Original) The article of manufacture of claim 21 further comprising:

measuring the time since the plunger slide was seated in the reservoir as indicated by the current measurements; and

signaling an error with the force sensor when the force sensor independently fails to recognize that the plunger slide is seated in the reservoir after a preset time threshold is exceeded.

25. (Withdrawn) The article of manufacture of claim 21, wherein the step of detecting when the plunger slide is seated in the reservoir is comprised of:

calculating an average current based on the current measurements;

comparing the average current to a threshold current; and

detecting when the plunger slide is seated in the reservoir when the average current exceeds the threshold current.

26. (Withdrawn) The article of manufacture of claim 25, wherein the step of calculating an average current uses the latest five current measurements.

27. (Withdrawn) The article of manufacture of claim 25, wherein the step of calculating an average current discards a high current measurement and a low current measurement.

28. (Withdrawn) The article of manufacture of claim 21, wherein the step of detecting a problem with the force sensor indicates the force sensor has failed.

29. (Withdrawn) The article of manufacture of claim 21, wherein the step of detecting a problem with the force sensor indicates the force sensor is marginal.

30. (Withdrawn) The article of manufacture of claim 21, wherein the current measurements to the motor are taken every 70 milliseconds.

31. (Withdrawn) A method of using current measurements to a motor in an infusion pump to detect when a plunger slide is seated in a reservoir, the method comprising:

taking current measurements to the motor;

calculating an average current based on the current measurements;

comparing the average current to a threshold current; and

detecting when the plunger slide is seated in the reservoir when the average current exceeds the threshold current.